

Application No.: 10/607,814
Amendment dated January 31, 2005
Reply to Office Action of November 2, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (currently amended) A method of depositing a material onto a work piece,

comprising:

identifying a target surface on the work piece, the target surface encompassing an area of interest;

defining an electron-source surface proximal to but substantially exclusive of the target surface;

providing deposition gas over the target surface; and

irradiating at least a portion of the electron-source surface to generate secondary electrons projecting into a region over the target surface, said secondary electrons interacting with the deposition gas to deposit a layer of deposition material onto the target surface including the area of interest, said irradiation of at least a portion of the electron-source surface being performed without substantially irradiating the target surface at least until sufficient material is deposited onto the target surface to protect the target surface from irradiation damage, wherein the area of interest in the target surface is not damaged being substantially undamaged by said irradiation.

2. (currently amended) The A method of claim 1 wherein the depositing a material onto a work piece,

identifying a target surface on the work piece, the target surface encompassing an area of interest that encompasses a feature to be cross-sectionally analyzed;

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defining an electron-source surface proximal to but substantially exclusive of the target surface;

providing deposition gas over the target surface; and

irradiating at least a portion of the electron-source surface to generate secondary electrons projecting into a region over the target surface, said secondary electrons interacting with the deposition gas to deposit a layer of deposition material onto the target surface including the area of interest, wherein the area of interest in the target surface is not damaged by said irradiation.

3. (original) The method of claim 2, wherein the feature is a line feature disposed substantially along the center of a rectangular shaped target surface.

4. (currently amended) The method of claim ~~1~~ 2, wherein the work piece is a wafer having a surface with a feature to be cross-sectionally analyzed, the act of identifying a target surface includes defining a substantially rectangular shaped surface encompassing a portion of the ~~line~~-feature to be analyzed.

5. (original) The method of claim 4, wherein the act of defining an electron-source surface includes defining a surface that substantially surrounds the target surface.

6. (original) The method of claim 1, wherein the act of irradiating includes irradiating with an ion beam.

7. (original) The method of claim 1, wherein the act of irradiating includes irradiating with an electron beam.

8. (currently amended) A method of depositing a material onto a work piece surface, comprising:

identifying a target surface on the work piece surface;

providing an auxiliary electron-source surface proximal to the target surface;

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providing deposition gas over the target surface; and

irradiating at least a portion of the auxiliary electron source surface to generate secondary electrons ~~emitting over that travel above~~ the target surface to interact with the deposition gas to deposit a deposition layer over the target surface without substantially irradiating the target surface.

9. (original) The method of claim 8, wherein the act of providing an auxiliary electron-source includes providing an auxiliary electron-source comprising a metallic surface that is part of a device for providing the deposition gas.

10. (currently amended) ~~The~~ A method of claim 8 depositing a material onto a work piece surface, comprising:

identifying a target surface on the work piece surface ~~wherein~~ the target surface ~~encompasses-encompassing~~ a feature to be cross-sectionally analyzed;

providing an auxiliary electron-source surface proximal to the target surface;

providing deposition gas over the target surface; and

irradiating at least a portion of the auxiliary electron source surface to generate secondary electrons emitting over the target surface to interact with the deposition gas to deposit a deposition layer over the target surface.

11. (original) The method of claim 10, wherein the feature is a line feature disposed substantially along the center of a rectangular shaped target surface.

12. (currently amended) The method of claim ~~8~~ 10, wherein the work piece is a wafer having a surface with a feature to be cross-sectionally analyzed, and the act of identifying a target surface includes defining a substantially rectangular shaped surface encompassing a portion of the ~~line~~-feature to be analyzed.

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13. (original) The method of claim 12, wherein the act of providing an auxiliary electron-source surface includes providing a metallic surface that tracks a scanning beam around the target surface.

14. (original) The method of claim 8, wherein the act of irradiating the auxiliary electron source includes irradiating it with an ion beam.

15. (original) The method of claim 8, wherein the act of irradiating the auxiliary electron source includes irradiating it with an electron beam.

16-26 (Cancelled)

27. (new) The method of claim 1 wherein the area of interest encompasses a feature to be cross-sectionally analyzed.

29. (new) The method of claim 27, wherein the feature is a line feature disposed substantially along the center of a rectangular shaped target surface.

30. (new) The method of claim 27, wherein the work piece is a wafer having a surface with a feature to be cross-sectionally analyzed, the act of identifying a target surface including defining a substantially rectangular shaped surface encompassing a portion of the feature to be analyzed.

31 (new) The method of claim 30, wherein the act of defining an electron-source surface includes defining a surface that substantially surrounds the target surface.

32. (new) The method of claim 1, wherein the act of defining an electron-source surface includes defining a surface that substantially surrounds the target surface.

33. (new) The method of claim 8 wherein the target surface encompasses a feature to be cross-sectionally analyzed.

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34. (new) The method of claim 33, wherein the feature is a line feature disposed substantially along the center of a rectangular shaped target surface.

35. (new) The method of claim 33, wherein the work piece is a wafer having a surface with a feature to be cross-sectionally analyzed, and the act of identifying a target surface including defining a substantially rectangular shaped surface encompassing a portion of the feature to be analyzed.

36. (new) The method of claim 35, wherein the act of providing an auxiliary electron-source surface includes providing a metallic surface that tracks a scanning beam around the target surface.

37. (new) The method of claim 8, wherein the act of defining an electron-source surface includes defining a surface that substantially surrounds the target surface.